

## **MONITORING INTRACELLULAR PROTEINS**

### **ABSTRACT OF THE DISCLOSURE**

Methods and compositions are provided for analyzing intracellular events employing fusion proteins comprising the small  $\beta$ -galactosidase fragment fused to a protein of interest or fragment thereof. By expressing the fusion protein in a cellular host, one can determine the effect of various agents on the activity of the fusion protein, adding the large  $\beta$ -galactosidase fragment to the fusion protein, either intracellularly or in a lysate and determining the activity of the formed  $\beta$ -galactosidase using a substrate that forms a detectable product. In this manner, degradation, complex formation, RNAi inhibition or other situation that affects  $\beta$ -galactosidase activity can be determined.